



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/785,632

02/24/2004

Marc Hohmann

071308.0507

3743

31625

7590

04/03/2008

BAKER BOTTS L.L.P.

PATENT DEPARTMENT

98 SAN JACINTO BLVD., SUITE 1500

AUSTIN, TX 78701-4039

EXAMINER

RIVELL, JOHN A

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

04/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/785,632	Applicant(s) HOHMANN, MARC	
	Examiner JOHN RIVELL	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/16/08 (amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 9 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments filed January 16, 2008 considered but they are not persuasive.

New claims 19 and 20 have been added. Thus claims 1-20 are pending.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cross hatching of the elements 5 and 6, demonstrative of the different materials such as for example plastic as the material of guide element 5 and steel as the material of stop element, as recited in claims 1-18, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In response to applicants' arguments relative to the above, while it is true that 37 CFR 1.83(a) does not require cross hatching of the drawing elements, the Rule does indeed require the drawings to show every element specified in the claims. This is especially true if, as in this case, the alleged novelty of the invention lies in the utilization of specific materials. The Examiner, in an effort to suggest a course of action, suggests that this claimed feature can be simply shown by using standard drawing conventions. Applicants' comment that "the current drawing convention does not prescribe a specific hatching for metal" is not well taken given the drawing conventions specified by M.P.E.P. §608.02 (IX) in which the PTO specifies drawing symbols to "be used to indicate various materials where the material is an important feature of the invention". In the chart in section 608.02 (IX) there is clearly shown recommended cross hatching for "metal" as well as "plastics" as well as several other materials. Thus for example, figure 3 can be modified, by employment of the appropriate cross hatching for the specific material for the specific element, to be demonstrative of the claimed materials as is required by 37 CFR 1.83(a). Additionally, the argument that the current cross hatching of elements 5 and 6 is representative of "different material" is respectfully disagreed with. The different cross hatching utilized is demonstrative of different elements but not different material.

Acknowledgment is made of applicant's claim for foreign priority based on an applications filed in Germany on August 31, 2001 and based on International Application No. PCT/DE02/03166 filed August 29, 2002.

Receipt is acknowledged of the German application, No. 10142609.7. However, as set forth in M.P.E.P. § 1895.01 and 1896, the Examiner is requesting a copy of the International Application in order to perfect the claim for priority.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "the grooves" in line 5. There is insufficient antecedent basis for this limitation in the claim. Claim 20 is included due to dependency.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 7 and 8 are rejected under 35 U.S.C. §102 (b) as being anticipated by Abrahams et al. (U. S. Pat. No. 3,810,716 cited by applicant).

The patent to Abrahams et al. discloses a "non-return valve (generally at either 26 or 28 and more specifically in figure 3) for a pump (at reciprocating piston 36),

Art Unit: 3753

comprising a receptacle (at 58) in which a valve seat is implemented, a closing body (ball 56) and a cage element (sleeve 62 and valve stop 60) in which the closing body (56) is disposed, whereby the cage element is bipartite, comprising a guide element (sleeve 62) and a stop element (60) and the guide element (62) is made from a material having a lower modulus of elasticity (i.e. plastic. See column 4, lines 2-5) than a material of the stop element" considered to be metallic based on drawing conventions, as recited in claim 1.

Regarding claim 2, in Abrahams et al., "the guide element (62) is made from plastic (column 4, lines 3-5) or aluminum and the stop element (inherently) from steel" since steel is the most predominate metallic compound manufactured.

Regarding claim 7, in Abrahams et al., "in the assembled state, the stop element (60) adjoins a mating surface (see fig. 2, lower surface of element 42) which is implemented on a valve housing (42)" as recited.

Regarding claim 8, in Abrahams et al. "grooves (read on plural sections of the groove at the upper end of sleeve 62 accommodating plate 60 as shown in figure 3) to accommodate the stop element are implemented in the guide element (62)" as recited.

Regarding applicants remarks concerning the above, the argument that Abrahams et al. does not employ a stop element at 60 made of metallic material is not well taken.

While the written portion of the patent is silent as to the nature of the material of the disk 60, the drawings of the disk are not so silent. Given the drawing conventions established by the PTO as set forth in M.P.E.P. §608.021 (IX) and the specific symbols

Art Unit: 3753

used for metallic materials, the cross hatching of figure 5 of Abrahams et al. is read as being indicative of metallic material. This, along with the clear written description of the "elastomeric sleeve 62" (column 4, line 3 of Abrahams et al.) is clear evidence that the patent to Abrahams et al discloses "in as complete detail as is contained in the... claim" the invention claimed.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams et al. (U. S. Pat. No. 3,810,716) in view of Yates, III (U. S. Pat. No. 5,967,180).

The patent to Abrahams et al. discloses all the claimed features, including implementing "the guide element (62)... as a sleeve". The "sleeve" of Abrahams et al. does not have "at least one overflow passage on its inner circumference" (claim 3) and "wherein the stop element is press-fit into the guide element".

The patent to Yates, III discloses, in figs. 8-10, that it is known in the art to employ a ball check valve "guide" element at 16" which includes on its inner circumference flutes between undulations 30 for the purpose of closely guiding the ball valve movement while at the same time allowing for uniform fluid flow about the ball valve and that a separate "bipartite" stop element 24" "press fit" (column 4, lines 34-38) into place for the purpose of ease of assembly.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Abrahams et al. "at least one overflow passage" on the inner circumference of guide sleeve 62 for the purpose of closely guiding the ball valve movement while at the same time allowing for uniform fluid flow about the ball valve and to employ the manufacturing step of press fitting the stop element 60 into the upper groove of the sleeve 62 for the purpose of ease of assembly as recognized by Yates, III.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams et al. (U. S. Pat. No. 3,810,716) in view of Sanford (U. S. Pat. No. 3,491,790).

The patent to Abrahams et al. discloses all the claimed features with the exception of having "a spherical indentation is implemented in the stop element" (claim 5) and "wherein the stop element has two, three or four areas of connection to the guide element" (claim 6).

The patent to Sanford discloses, in figure 6 for example, that it is known in the art to employ in a bipartite stop element 26 which includes an "indentation" on its underside receiving the periphery of the ball check valve 25 when open, thus holding the ball check valve centrally within the guide sleeve/chamber when open allowing for uniform discharge of fluid from the plural openings of the valve as well as having "four (27, 28, 29, 30) areas of contact" between the stop element 26 and the associated guide sleeve between openings 14, 15, 16, 17 for the purpose of providing even holding forces retaining the valve stop in place under load from the ball when in the open position.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Abrahams et al. an "indentation" on the underside of bipartite stop element 60, receiving ball element 56 when in the open

position and to include at least “four areas of contact” between the stop element 60 and the sleeve 62 for the purpose of holding the ball check valve 56 centrally within the guide sleeve 62 when open allowing for uniform discharge of fluid from the plural openings 80 of the valve and providing even holding forces retaining the valve stop in place under load from the ball when in the open position, respectively, as recognized by Sanford.

Claims 10, 11, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams et al. (U. S. Pat. No. 3,810,716) in view of the Prior Art of instant figure 12.

In making and/or using the device of Abrahams et al. one necessarily performs a “method for delivering (fluid) comprising the steps of:... providing a non-return valve (26, 28) for (a) high pressure pump (represented at pump piston 36), wherein the non-return valve comprises a receptacle (within sleeve 62) in which a valve seat (at the upper end of plate 58) is implemented, a closing body (valve ball 56) and a cage element (sleeve 62 and stop 60) in which the closing body (56) is disposed, whereby the cage element is bipartite, comprising a guide element (sleeve 62) and a stop element (60) and the guide element (62) is made from a material (plastic column 4, lines 2-5) having a lower modulus of elasticity than a material of the stop element (considered to be metallic based on drawing conventions)” as recited in claim 10.

Thus the patent to Abrahams et al. discloses all the claimed features with the exception of having the provision of “a high-pressure pump for delivering fuel for a common rail injection system”.

The prior art as disclosed in figure 12 of the instant application discloses that it is known in the art to employ a ball check valve *per se* as a check valve utilized in “a high-

pressure pump for delivering fuel for a common rail injection system” for the purpose of allowing one way fluid flow in the fuel injection system the device is employed in.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ the check valve of Abrahams et al. as a one way valve in a high pressure pump for delivering fluid flow in a fuel injection system” for the purpose of allowing one way fluid flow in the fuel injection system the device is employed in as recognized by the prior art of instant application figure 12.

Regarding claim 11, in Abrahams et al., “the guide element (62) is made from plastic (column 4, lines 3-5) or aluminum and the stop element (inherently) from steel” since steel is the most predominate metallic compound manufactured.

Regarding claim 16, in Abrahams et al., “in the assembled state, the stop element (60) adjoins a mating surface (see fig. 2, lower surface of element 42) which is implemented on a valve housing (42)” as recited.

Regarding claim 17, in Abrahams et al. “grooves (read on plural sections of the groove at the upper end of sleeve 62 accommodating plate 60 as shown in figure 3) to accommodate the stop element are implemented in the guide element (62)” as recited.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams et al. (U. S. Pat. No. 3,810,716) in view of the Prior Art of instant figure 12 as applied to claims 10, 11, 16 and 17 above further in view of Yates, III (U. S. Pat. No. 5,967,180) as applied to claims 3 and 4 above.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams et al. (U. S. Pat. No. 3,810,716) in view of the Prior Art of instant figure 12 as applied to claims 10, 11, 16 and 17 above further in view of Sanford (U. S. Pat. No. 3,491,790) as applied to claims 5 and 6 above.

Claims 9 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19 and 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571)272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/John Rivell/
John Rivell
Primary Examiner
Art Unit 3753**

j.r.